SEQUENCE LISTING

<110> JCR Pharmaceuticals Co.,. Ltd.

5   <120> Anti-HIV agents

<130> GP47

<160> 5

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<210> 1
<211> 1296
<212> DNA
<213> Homo sapience

15

<400> 1

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atg aga gcc ctg ctg gcg cgc ctg ctt ctc tgc gtc ctg gtc gtg agc      48
Met Arg Ala Leu Leu Ala Arg Leu Leu Leu Cys Val Leu Val Val Ser
 1               5                  10                  15
```

20

```
gac tcc aaa ggc agc aat gaa ctt cat caa gtt cca tcg aac tgt gac      96
Asp Ser Lys Gly Ser Asn Glu Leu His Gln Val Pro Ser Asn Cys Asp
            20                  25                  30
```

25

```
tgt cta aat gga gga aca tgt gtg tcc aac aag tac ttc tcc aac att     144
Cys Leu Asn Gly Gly Thr Cys Val Ser Asn Lys Tyr Phe Ser Asn Ile
            35                  40                  45
```

```
cac tgg tgc aac tgc cca aag aaa ttc gga ggg cag cac tgt gaa ata     192
```
30
```
His Trp Cys Asn Cys Pro Lys Lys Phe Gly Gly Gln His Cys Glu Ile
            50                  55                  60
```

```
gat aag tca aaa acc tgc tat gag ggg aat ggt cac ttt tac cga gga     240
Asp Lys Ser Lys Thr Cys Tyr Glu Gly Asn Gly His Phe Tyr Arg Gly
```

65   70   75   80

```
aag gcc agc act gac acc atg ggc cgg ccc tgc ctg ccc tgg aac tct        288
Lys Ala Ser Thr Asp Thr Met Gly Arg Pro Cys Leu Pro Trp Asn Ser
                85              90              95
```

5

```
gcc act gtc ctt cag caa acg tac cat gcc cac aga tct gat gct ctt        336
Ala Thr Val Leu Gln Gln Thr Tyr His Ala His Arg Ser Asp Ala Leu
        100             105             110
```

10

```
cag ctg ggc ctg ggg aaa cat aat tac tgc agg aac cca gac aac cgg        384
Gln Leu Gly Leu Gly Lys His Asn Tyr Cys Arg Asn Pro Asp Asn Arg
        115             120             125
```

15

```
agg cga ccc tgg tgc tat gtg cag gtg ggc cta aag ccg ctt gtc caa        432
Arg Arg Pro Trp Cys Tyr Val Gln Val Gly Leu Lys Pro Leu Val Gln
        130             135             140
```

```
gag tgc atg gtg cat gac tgc gca gat gga aaa aag ccc tcc tct cct        480
Glu Cys Met Val His Asp Cys Ala Asp Gly Lys Lys Pro Ser Ser Pro
145             150             155             160
```

20

```
cca gaa gaa tta aaa ttt cag tgt ggc caa aag act ctg agg ccc cgc        528
Pro Glu Glu Leu Lys Phe Gln Cys Gly Gln Lys Thr Leu Arg Pro Arg
                165             170             175
```

25

```
ttt aag att att ggg gga gaa ttc acc acc atc gag aac cag ccc tgg        576
Phe Lys Ile Ile Gly Gly Glu Phe Thr Thr Ile Glu Asn Gln Pro Trp
                180             185             190
```

30

```
ttt gcg gcc atc tac agg agg cac cgg ggg ggc tct gtc acc tac gtg        624
Phe Ala Ala Ile Tyr Arg Arg His Arg Gly Gly Ser Val Thr Tyr Val
        195             200             205
```

tgt gga ggc agc ctc atc agc cct tgc tgg gtg atc agc gcc aca cac   672
Cys Gly Gly Ser Leu Ile Ser Pro Cys Trp Val Ile Ser Ala Thr His
    210   215   220

tgc ttc att gat tac cca aag aag gag gac tac atc gtc tac ctg ggt   720
Cys Phe Ile Asp Tyr Pro Lys Lys Glu Asp Tyr Ile Val Tyr Leu Gly
225   230   235   240

cgc tca agg ctt aac tcc aac acg caa ggg gag atg aag ttt gag gtg   768
Arg Ser Arg Leu Asn Ser Asn Thr Gln Gly Glu Met Lys Phe Glu Val
             245   250   255

gaa aac cta atc cta cac aag gac tac agc gct gac acg ctt gct cac   816
Glu Asn Leu Ile Leu His Lys Asp Tyr Ser Ala Asp Thr Leu Ala His
             260   265   270

cac aac gac att gcc ttg ctg aag atc cgt tcc aag gag ggc agg tgt   864
His Asn Asp Ile Ala Leu Leu Lys Ile Arg Ser Lys Glu Gly Arg Cys
             275   280   285

gcg cag cca tcc cgg act ata cag acc atc tgc ctg ccc tcg atg tat   912
Ala Gln Pro Ser Arg Thr Ile Gln Thr Ile Cys Leu Pro Ser Met Tyr
             290   295   300

aac gat ccc cag ttt ggc aca agc tgt gag atc act ggc ttt gga aaa   960
Asn Asp Pro Gln Phe Gly Thr Ser Cys Glu Ile Thr Gly Phe Gly Lys
305   310   315   320

gag aat tct acc gac tat ctc tat ccg gag cag ctg aaa atg act gtt   1008
Glu Asn Ser Thr Asp Tyr Leu Tyr Pro Glu Gln Leu Lys Met Thr Val
             325   330   335

gtg aag ctg att tcc cac cgg gag tgt cag cag ccc cac tac tac ggc   1056
Val Lys Leu Ile Ser His Arg Glu Cys Gln Gln Pro His Tyr Tyr Gly

```
                    340                     345                     350

     tct gaa gtc acc acc aaa atg ctg tgt gct gct gac cca cag tgg aaa      1104
     Ser Glu Val Thr Thr Lys Met Leu Cys Ala Ala Asp Pro Gln Trp Lys
5            355                     360                     365


     aca gat tcc tgc cag gga gac tca ggg gga ccc ctc gtc tgt tcc ctc      1152
     Thr Asp Ser Cys Gln Gly Asp Ser Gly Gly Pro Leu Val Cys Ser Leu
             370                     375                     380
10

     caa ggc cgc atg act ttg act gga att gtg agc tgg ggc cgt gga tgt      1200
     Gln Gly Arg Met Thr Leu Thr Gly Ile Val Ser Trp Gly Arg Gly Cys
     385                     390                     395                 400


15   gcc ctg aag gac aag cca ggc gtc tac acg aga gtc tca cac ttc tta      1248
     Ala Leu Lys Asp Lys Pro Gly Val Tyr Thr Arg Val Ser His Phe Leu
                     405                     410                     415


     ccc tgg atc cgc agt cac acc aag gaa gag aat ggc ctg gcc ctc tga      1296
20   Pro Trp Ile Arg Ser His Thr Lys Glu Glu Asn Gly Leu Ala Leu
                     420                     425                     430
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<210> 2

<211> 431

25 <212> PTN

<213> Homo sapience

<400> 2

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     Asp Ser Lys Gly Ser Asn Glu Leu His Gln Val Pro Ser Asn Cys Asp
                     20                      25                      30
```

Cys Leu Asn Gly Gly Thr Cys Val Ser Asn Lys Tyr Phe Ser Asn Ile
      35   40   45

His Trp Cys Asn Cys Pro Lys Lys Phe Gly Gly Gln His Cys Glu Ile
5   50   55   60

Asp Lys Ser Lys Thr Cys Tyr Glu Gly Asn Gly His Phe Tyr Arg Gly
65   70   75   80

10   Lys Ala Ser Thr Asp Thr Met Gly Arg Pro Cys Leu Pro Trp Asn Ser
               85   90   95

Ala Thr Val Leu Gln Gln Thr Tyr His Ala His Arg Ser Asp Ala Leu
          100   105   110
15

Gln Leu Gly Leu Gly Lys His Asn Tyr Cys Arg Asn Pro Asp Asn Arg
         115   120   125

Arg Arg Pro Trp Cys Tyr Val Gln Val Gly Leu Lys Pro Leu Val Gln
20   130   135   140

Glu Cys Met Val His Asp Cys Ala Asp Gly Lys Lys Pro Ser Ser Pro
145   150   155   160

25   Pro Glu Glu Leu Lys Phe Gln Cys Gly Gln Lys Thr Leu Arg Pro Arg
              165   170   175

Phe Lys Ile Ile Gly Gly Glu Phe Thr Thr Ile Glu Asn Gln Pro Trp
         180   185   190
30

Phe Ala Ala Ile Tyr Arg Arg His Arg Gly Gly Ser Val Thr Tyr Val
         195   200   205

Cys Gly Gly Ser Leu Ile Ser Pro Cys Trp Val Ile Ser Ala Thr His

```
           210              215              220

       Cys Phe Ile Asp Tyr Pro Lys Lys Glu Asp Tyr Ile Val Tyr Leu Gly
       225              230              235              240
   5
       Arg Ser Arg Leu Asn Ser Asn Thr Gln Gly Glu Met Lys Phe Glu Val
                   245              250              255

       Glu Asn Leu Ile Leu His Lys Asp Tyr Ser Ala Asp Thr Leu Ala His
  10               260              265              270

       His Asn Asp Ile Ala Leu Leu Lys Ile Arg Ser Lys Glu Gly Arg Cys
                   275              280              285

  15   Ala Gln Pro Ser Arg Thr Ile Gln Thr Ile Cys Leu Pro Ser Met Tyr
                   290              295              300

       Asn Asp Pro Gln Phe Gly Thr Ser Cys Glu Ile Thr Gly Phe Gly Lys
       305              310              315              320
  20
       Glu Asn Ser Thr Asp Tyr Leu Tyr Pro Glu Gln Leu Lys Met Thr Val
                   325              330              335

       Val Lys Leu Ile Ser His Arg Glu Cys Gln Gln Pro His Tyr Tyr Gly
  25               340              345              350

       Ser Glu Val Thr Thr Lys Met Leu Cys Ala Ala Asp Pro Gln Trp Lys
                   355              360              365

  30   Thr Asp Ser Cys Gln Gly Asp Ser Gly Gly Pro Leu Val Cys Ser Leu
                   370              375              380

       Gln Gly Arg Met Thr Leu Thr Gly Ile Val Ser Trp Gly Arg Gly Cys
       385              390              395              400
```

Ala Leu Lys Asp Lys Pro Gly Val Tyr Thr Arg Val Ser His Phe Leu
                    405   410   415

5   Pro Trp Ile Arg Ser His Thr Lys Glu Glu Asn Gly Leu Ala Leu
                    420   425   430

<210> 3
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10   <212> PTN
<213> Homo sapience

<400> 3
Lys Lys Phe Gly

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<210> 4
<211> 12
<212> PTN
<213> Homo sapience

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<400> 4
Ala Ser Thr Asp Thr Met Gly Arg Pro Cys Leu Pro
                    5   10
<210> 5
25   <211> 10
<212> PTN
<213> Homo sapience

<400> 5
30   Arg Arg Pro Trp Cys Tyr Val Gln Val Gln
                    5   10